



CHESHIRE COUNTY COUNCIL.

EDUCATION DEPARTMENT.

REPORT

OF THE

Chief School Medical Officer

FOR THE YEAR

1923,

BY

MEREDITH YOUNG,

M.D., D.P.H., D.S.S.

Of Ipswich and Bury St Edmunds.

Lecturer in School Hygiene, Victoria University of Manchester.



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MEDICAL INSPECTION.

— 01.

STAFF.

School Medical Officer:

MEREDITH YOUNG, M.D., D.P.H., &c.

Assistant Medical Officers:

A. V. STOCKS, M.A., M.B., Ch.B., D.P.H.

W. J. McIVOR, B.A., M.B., Ch.B., D.P.H.

GLADYS RUSSELL, M.B., Ch.B.

G. SCOTT CRAIG, M.A., M.B., Ch.B., D.P.H.

Ophthalmic Surgeons:

G. AUBREY JELLY, M.R.C.S., L.R.C.P., D.P.H.

CYRIL JACOB, M.B., B.S.

School Dentist:

S. WHITWORTH, L.D.S.

Health Visitors: 31.

Dental Nurses: 2.

Chief Clerk:

VINCENT O'CONNOR.

CHESHIRE COUNTY COUNCIL.

EDUCATION COMMITTEE.

INTRODUCTION.

*To the Chairman and Members of the
Education Committee.*

MR. CHAIRMAN, LADIES AND GENTLEMEN,

I have the honour to submit for your consideration my Report on the Medical Inspection of School Children in your County for the year 1923.

There are very few matters on which special comment is necessary as the scheme has been carried out on lines already familiar to your Committee and approved by the Board of Education.

The dental scheme was altered at the beginning of the year so as to provide a more conservative system than previously for a limited child population. When this system can be applied equally all over the County, but not until then, your Committee will be in a position to state that you are doing all that is possible for the dental welfare of your school children. At the time of writing this Report a considerable step has been taken to remedy this defect in the scheme and no doubt the results achieved will warrant its still further extension. What one would like to see in this connection would be an extension of the scheme so as to link it up with the Maternity and Child Welfare work so that both children under the age of five years and mothers could be dealt with. By the time a child has reached the age of five years considerable damage may have already resulted to its teeth and some of them may even have passed beyond the stage of salvation.

Another extension one would like to see established is a linking up of the School Medical Service with the work of the

Medical Inspectors of Factories so that the last-named could have available the whole history of the child to be examined from the time he entered school to the time he left it to seek employment. This should prove one of the easiest possible things to arrange whilst its great value cannot be denied.

The time has long since arrived for the introduction of a comprehensive scheme for dealing both in a preventive and curative manner with the crippling defects of children. The adjoining County of Shropshire affords a splendid example of what can be achieved in this direction. In this County crippling due to tuberculosis is adequately supervised, but it is only in comparatively isolated instances that other forms of crippling can be ameliorated.

I have embodied in the Report the observations of my colleagues on various subjects in an endeavour to bring into prominence certain specialised problems on which they can speak with more intimate knowledge than I can myself.

It gives me the greatest pleasure to state once again that my relations with all those engaged either directly or indirectly on the work of school medical inspection have continued to be most friendly. I have never yet asked for co-operation or assistance without obtaining in the fullest measure all that I desired, even though it involved work and trouble quite outside ordinary duty. For this I am more than grateful to all concerned.

My gratitude is also due to your Committee for the readiness with which you have come to my assistance on the many occasions when I have placed special problems before you.

I am,
 Mr. Chairman, Ladies and Gentlemen,
 Yours obediently,
 MEREDITH YOUNG.

CHESHIRE COUNTY COUNCIL.

EDUCATION COMMITTEE.

 ANNUAL REPORT

OF THE

CHIEF SCHOOL MEDICAL OFFICER,

1923.

Co-ordination.

The School Medical service is co-ordinated as well as circumstances permit with the other health services of the County Council. The Health Visitors are engaged not only on the work of this service, but are also engaged on the Maternity and Child Welfare, Tuberculosis and Mental Deficiency Act schemes.

No Nursery Schools have yet been established. The care of debilitated children under school age is in the hands of the Maternity and Child Welfare Committee. This Committee has three cots in the Hoyalake Babies' Hospital for the treatment of such children and other beds are obtained from time to time.

School Hygiene.

Dr. A. V. Stocks (North Cheshire) reports as under on the schools in his area :—

“Surroundings : one of the worst playgrounds has been re-asphalted during the year, but several others are greatly in need of attention.

“Buildings : two schools urgently require “pointing” and outside painting; in one of these the walls are becoming damp inside owing to the neglect of the outside brickwork. Several schools need re-decoration inside, but it is satisfactory to note that four schools have been thoroughly decorated during the year. One school suffers from a leaky roof.

“Drainage, etc. : playground drains and gullies receiving the downspouts were found to be stopped up at four schools, and broken downspouts were noticed at one school. At

another school where this was pointed out last year the defects have all been remedied. Several urinals have no satisfactory flushing arrangements.

“Heating : the school in which this was found to be so defective and in which there were several stoves in a dangerous condition has had its heating arrangements thoroughly overhauled and altered, the heating being now very satisfactory except in one room.

“Lighting : two schools have had electric light installed during the year, with a very great improvement in the illumination during the winter afternoons. At another school trees which obstructed the natural lighting are in process of being cut down. At another school, upon which a special report was made as to the harmful effect of the bad natural lighting upon the eyesight of the infants taught there, the dark wood roof has been painted white over the entire school inside, with a marked effect upon the lighting of all the rooms.

“Furniture : the desks at a country Infants’ school which were of the largest size used in upper standards and which have been reported upon as most unsatisfactory for several years, have at last been replaced by dual adjustable desks, and special desks for the beginners.

“The water supply remains a problem in some of the country schools, being non-existent in four, and more or less undrinkable in one. In the latter case an analysis of the water is being made.”

Medical Inspection.

The Tables at the end of this Report shew in detail the work which has been carried out. Summarising these it will be seen that the inspections have dealt with the following children :—

Routine Inspections	{	Entrants	5,494
		Intermediate Groups (8-9 years)	6,691
		Leavers	7,109
			<hr/>
		Total ...	19,294
Special Inspections	{	Special Cases	4,498
		Re-Examinations	2,398
			<hr/>
Grand Total of Individual Children Examined			26,190

The Board’s Schedule of inspection has been followed in all cases. Educational routine has not been interfered with and the co-operation of Head Teachers has been as cordial and

as helpful as always. The inspections have always been conducted on school premises. The early ascertainment of crippling defects is done through our Health Visitors, who also act under the Maternity and Child Welfare and other Schemes of your Council.

Co-operation of Teachers and Others.

Not only Teachers but School Attendance Officers and Officials of the N.S.P.C.C. have, without exception, been most helpful to all of us.

I cordially endorse the following remarks of Dr. A. V. Stocks on this point. He writes as under :—

“The co-operation of the teachers has throughout the year been of the very greatest assistance in the work of medical inspection. Many of the Head Teachers, in spite of the heavy demands upon their time, go to a great deal of trouble to plan out the time-table, select special cases and afford valuable information about the children to be examined. Where this is done the best results are obtained from the doctor’s visit and the whole scheme gains in efficiency.

“I am continually being impressed by the influence which teachers can, and in many cases do, exert with regard to the physical well-being of the children, particularly in the matters of cleanliness of person, hair and clothes, care of the teeth and correct habits of posture and breathing.”

Co-operation of Parents.

There is evidence that parents are evincing a greater interest in medical inspection as the years pass by and as they find that it is a service intended to help them and not to make trouble for them. When the scheme was new there was an idea prevalent that its sole object was to discover such conditions as dirt, vermin, bad teeth, &c., and to put the parents to the trouble and expense of having these rectified. Now that it has been made clear that we only desire to help in bringing up healthy and strong children the atmosphere is entirely changed and we often have parents bringing other children than those due for inspection and asking that they may be examined.

The experience of Dr. Stocks quoted below is that of all the other Medical Inspectors. He writes :—

“The number of parents interviewed during the year at the medical inspections was larger in the aggregate than in any of the last few years, the number of parents being 1,608, representing about 25 per cent. of the children examined.

The parents of the younger children, as is natural, attend in the greatest numbers, and it is in these cases that their presence is of the greatest value.

“Objections to medical inspection were very few. Much is due to the example set by the better educated and more well-to-do among the parents, who rarely object in spite of the fact that their children are already receiving adequate medical oversight. The fact that they not only allow their children to be examined but frequently come themselves to the school at the medical inspection has a wholesome influence on the other parents.”

Routine School Medical Inspection.

Dr. W. J. McIvor expresses his views on this matter in the following report:—

“I would like to emphasise the necessity of a good system in the care and classification of the medical record cards of the children in public elementary schools. It is not satisfactory, for instance, to keep them in batches corresponding with the date of their last inspection. Another method, which has drawbacks, and no doubt one advantage, is to sub-divide them according to the year of birth. As recommended by the Circular of the Board of Education, the classification should be by their standard or class. The various teachers of these classes will have access to them, and their interest will be stimulated in the welfare and progress of their pupils. It is a pleasing task to record the fact that some teachers, and especially the head masters of secondary schools, *do* know the names and characteristics of every scholar in their care. At present, the list of children who are examined at Routine Medical Inspection tends to be swollen by the addition of those referred for future observation at a previous inspection. Sometimes the importance is not realised of including all those too who have missed their routine examination in the past. If the head teacher has not done so, and it would appear very difficult beforehand to effectively instruct him, who exactly *are* meant, it becomes necessary for the School Medical Inspector to peruse the record cards of all attending the school.

“Even then, it is often doubted if every child in the school *has* a record card. If the cards are classified by standard, the teachers of the different classes can ascertain this fact or otherwise rapidly. In this way the total number of those examined is increased, but not in my opinion unduly. Teachers should be encouraged to keep duplicate lists of children found to be suffering with various defects, especially those suffering from defects of vision and those referred for dental treatment. Sometimes the record cards are at the head office or possibly in the hands of the Assistant School

Medical Officer for the moment, and the visit of the School Oculist, without such a list, would be greatly lessened in value.

“In general, it would seem necessary to hand over to the head teacher these lists on conclusion of the inspection; in my own case they are forwarded by post and instructions added for their use.

“Finally, the valuable assistance given by teachers, and especially the head teacher, with few exceptions, deserve every praise, both in the preliminary clerical work entailed, in the personal interest taken in medical inspection, in their appreciation of its value to their pupils, and often in the onerous work of undressing and clothing the children when short-handed themselves. Indeed their aid is a vital necessity to the success of our efforts, for on them largely devolves the task of seeing that remedial measures are finally carried out. I have ever found it willingly performed.

“The interest taken by parents in the medical inspection of their children is everywhere vastly increased, and it is exceptional now to find any who show a hostile attitude to it, or its objects. Relations with the School Attendance Officers are amicable, and the co-operation mutually helpful. The services of the Inspector of N.S.P.C.C. have been enlisted in the more difficult cases with praiseworthy effect in part of my area, but I regret to record that in the remainder he has not given us the support in checking neglect and uncleanness usually expected from one in his office.”

The Findings of Medical Inspection.

Malnutrition.—The number of cases requiring attention under this heading varies but little from year to year: there were 47 such cases during 1923.

The condition is one which causes serious anxiety to parents for the simple reason that it is one which they can recognise themselves and in which they have probably spent much money on patent foods and medicines without any material result. The sequels of the condition are many and serious and for this reason it receives special attention at the hands of your Medical Inspectors.

Uncleanliness.—It is rather pleasing to be able to report a diminution under this heading, only 410 cases being referred for attention as against 596 during the previous year. The percentage of such cases is still, however, far too high, though it may diminish when unemployment (which is in my opinion responsible for much of it) becomes less acute.

The remarks of Dr. Stocks on this matter are very pertinent. He reports:—

“The percentage of children with unclean heads was 3.9 per cent. at the routine inspections, or about the same as the previous year. The highest percentage obtained in the towns of Northwich and Runcorn, where it was 5 per cent.; in Altrincham it was 4 per cent. and in the Rural areas 3 per cent. It was lowest in Stockton Heath (1.5 per cent.)

“Uncleanliness of the body was noted in 5.5 per cent.; in most of these there was evidence of infestation by ‘*Pulex irritans*.’ The worst figures are from the Northwich area, where the percentage is as high as 9.4. This raises the question as to whether there are adequate facilities for public baths in that town: the children are much cleaner in Runcorn and Altrincham, where public baths are provided.”

Ringworm.—The records for 1923 shew a considerable increase in the number of cases of this disease over those for 1922—119 as compared with 46. There were a few limited outbreaks, but these were specially visited—usually on the request of the Head Teacher concerned—and were readily controlled. Now that we have a number of Minor Treatment Centres at work it is hoped that this disease will be more easily controlled and will not cause such a serious loss of school attendance as in the past.

Dr. Stocks remarks:—

“Several schools have had an outbreak during the year, but careful attention on the part of the School Nurses has helped materially to limit the spread of this troublesome complaint. A number of cases not under medical treatment elsewhere have been successfully treated at the minor ailment clinics. The new specific Kathiolan has had good results in some cases, but it has to be used with care, or a dermatitis may result. Several cases have done well on Iodex. In a few cases within easy reach of Liverpool or Manchester X-Ray treatment has been obtained with, of course, much speedier results.”

Scabies.—This disease has been more prevalent than in previous years, there being 52 cases on the records. The treatment of it however has not presented any difficulty. More than once outbreaks have been reported in schools but with one exception these proved false alarms.

Impetigo.—Of this disease we have had 296 cases reported, the figures having been increased by several school outbreaks. The School Clinics have proved most useful in dealing with this condition. More than one Head Teacher has testified to

the improvement of school attendance resulting from the clinic treatment of it.

Eye Diseases and Defective Vision.

The reports of the School Ophthalmic Surgeons are appended and indicate the nature and extent of the work done.

Dr. Aubrey Jelly reports :—

“My work amongst the school children during the past year has proceeded smoothly and satisfactorily. The parents are more anxious for their children to be examined and the children are less reluctant to wearing their glasses. I find it pays to take special trouble to convince the child of the real increase of sight when the glasses are worn and when this is marked and undeniable most children will wear their glasses regularly. It is in those cases where the vision of one eye is excellent that the difficulty arises, and it is hard to convince a child that the defective eye will become still more defective if it is not put in use by means of the spectacles.

“When vision is so defective from a condition which glasses cannot remedy and when this defect is so great that they cannot receive instruction in the ordinary way I have found it necessary to recommend removal to a school for the partially blind, and in one case I have had to give evidence before the Magistrates in order to enforce this recommendation.

“There are a large number of children suffering from chronic inflammation of the eyelids. These cases are being treated with success at the Clinics recently established. There will be a considerable decrease of inflammatory eye trouble in consequence.

“During the year I have examined 1,346 children. Of these 179 were suffering from squint, and I have prescribed glasses for 480.

“The School Nurses have helped me in every possible way not only at the time of examination but in the collection and preparation preceding.”

Dr. Cyril Jacob reports :—

“During the year ending December 31st, 1923, I examined the eyes of 1,886 school children in South and West Cheshire.

“Of these 1,376 were examined for the first time and 510 were re-examined.

“There were 892 cases of Hypermetropia and Hypermetropic Astigmatism. There were 61 cases of simple Myopia,

77 cases of Myopic Astigmatism, 127 of Mixed Astigmatism, and 15 of Anisometropia; Total 1,172.

“There were 225 cases of Convergent Squint, of which 12 showed vertical displacement, and 25 of Divergent Squint.

“In 142 cases no defect was found.

“Glasses were prescribed for 406 children. In 31 cases the wearing of glasses was ordered to be discontinued.

“There were 318 cases of External Eye Disease, of which 171 were of Marginal Blepharitis and 106 of Conjunctivitis.

“The older children referred for examination were proportionately a good deal more numerous than the younger. The chief reason I think is the greater demand made on the eyesight of the older children tending to render manifest any latent defects. Also as is well known myopia tends to increase with age.

“Attitude and lighting are very important as regards safeguarding the eyesight of the children and must be carefully watched. Books or work should not be held too close to the eyes, and the child should not bend over his work. The light should be of good volume. It should be on the left side and should not shine in the eyes of the children.”

Dr. A. V. Stocks reports as under:—

“In the routine inspections 80 cases of Blepharitis were met with, or 1.4 per cent. This shows a steady fall, the figure for 1922 being 2 per cent. and for 1921 2.5 per cent.

“I attribute this to two causes, firstly the spread of information regarding the treatment of this common malady, especially through the new printed treatment slip; and secondly the wet summer, as there seems to be a rise in the number of cases in dry, dusty weather: this was especially noticeable in the long dry summer of 1921.

“With the opening of some minor ailment Clinics it is reasonable to expect a still further decline in the number of cases.

“As in the case of other eye defects the percentage of cases is highest in Runcorn, (3.0 per cent.), or double the incidence elsewhere.

“Only twenty-one cases of Conjunctivitis were seen, or 0.4 per cent. (the same as last year).

“Out of some 4,600 children at the routine inspections it was found that 91, or two per cent., were wearing spectacles.

No less than 89 children were suffering from squint, or over 1.9 per cent. Strabismus is much more common in the Urban than in the Rural areas; the percentage among 1,136 children in Rural schools was 0.8 per cent.; in Altrincham and Northwich the percentage was 1.5, in Weaverham and Barnton 1.7, in Stockton Heath 2.5 (this figure also obtained in 1922), and in Runcorn 3.1 per cent. (or 43 children out of 1,389 examined).

“Defective vision of such a degree as to render reference to an Oculist desirable was found to exist in 252 children, or 13.8 per cent. at the routine inspections. The usual standard taken was vision 6/12 or worse with both eyes, or 6/18 or worse in one eye, the other eye being good.

“The figures for various areas again show the wide discrepancy that was alluded to in the report for 1921, and it is interesting to note that they have much the same relation to one another, showing that the variation is not a temporary but a permanent phenomenon. Runcorn again has the highest figure with a percentage of 18.1 with defective eyesight, Altrincham next with 14.6, Northwich and Stockton Heath 14, Barnton 11, and the Rural schools generally average about 9 per cent.

“The number of children who have had glasses prescribed and who have either not been provided with them by their parents, or are not wearing them or have lost or broken them, is unfortunately very considerable, and this presents a difficult problem, particularly in some Runcorn schools.”

Ear Diseases and Defective Hearing.

The number of cases of defective hearing is not a large one—77 out of 26,190 cases examined, or 0.3 per cent. Otitis media (commonly known as “ear discharge”) was found in 144 children. It is hoped that a much more speedy cure will be effected in the last-named condition in places where a School Clinic is at work and that thus a good deal of school attendance will be saved, to say nothing of the salvation of hearing and health.

Dr. A. V. Stocks offers the following remarks on this subject :—

“Hearing was found to be defective in 266 cases, or about 6.0 per cent.: many of these cases were due to temporary catarrh in the Eustachian tubes.

“Otorrhœa was seen in 64 cases at routine inspections, and referred for treatment where treatment was not already being undertaken. This represents 1.3 per cent. of cases

examined. Some of the worst cases with copious and malodorous discharge have done well at the minor ailment Clinics when treated daily with peroxide of hydrogen or carefully syringed with lotion."

Nose and Throat Diseases.

The records under this heading refer to conditions of tonsils and adenoids alone. The findings were:—

Cases of enlarged tonsils only	...	...	...	287
„ adenoids only	...	...	...	237
„ enlarged tonsils with adenoids as well	...	...	...	560
Total	...	...	...	1084

During part of the year operations for these conditions had to be suspended so far as this Department was concerned for the simple reason that we had no money left to spend. Then your Committee suggested that I should endeavour to secure a reduction in the charges made by the various Hospitals we had been utilising for this purpose. The Hospitals met me very fairly indeed and having got their terms I submitted them to the County Medical and Panel Committee. The decision of this Committee did not become operative until after the Annual Representative Meeting of the British Medical Association. For these reasons there was considerable delay in the negotiations and operations had to be suspended for some months. This is a matter to be regretted as the benefits, both physical and mental, resulting from operative treatment in suitable cases of this character are admitted by everyone. It will take some little time to make up the leeway.

Dr. W. J. McIvor comments as under on this subject:—

"The predisposing factors in the development of adenoids and other similar pharyngeal proliferations, including the evils that follow in their train, are mainly, taking them in chronological order, first, the element of heredity, next the ante-natal influences, sometimes even the accident of the presentation at birth, then, (and here we are on surer ground) the use of the "Dummy" teat, and the bottle-feeding of infants. Afterwards comes something prejudicial in the environment of the growing child, such as errors of diet, continued infection, etc.

"To retrace our steps a little, in a normal breast-fed infant, the pressure in feeding is a positive one, and is exercised upon the maxillæ in front, tending to keep the jaws semi-circular in shape.

“This may be contrasted with the indrawing or negative pressure within the cheeks produced by the sucking merely of a teat, and that too for inordinately long periods, tending to originate a deformity of the palate and nasal bones. Now the classical description of the “Adenoid Facies” in older children involves a deformity of the maxillæ and nasal bones.

“The jaws are flattened from side to side and the arch of the palate narrowed. The early obstruction of the air-way, aided by a proliferation of adenoidal tissue and interference with the blood-supply, has led to a retardation of development of the nasal bones and an unhealthy state of the mucous membrane, inducing further infection and obstruction, a vicious circle being established.

“My plea, however, is for the recognition as soon as possible of the seriousness of nasal obstruction when associated with this deformity of the maxillæ at an early age. The latter may readily be seen, if in a lesser degree, before the permanent teeth have begun to erupt in children who have not yet reached the age of six. At this age, the results of operation for the removal of adenoids have been more successful. Now these cases owing to the early onset, if not operated upon about this time, will develop into the severe type, and even if operation is merely postponed for a few years, the above features will be accentuated, and have become permanent, and the many typical well-known defects superimposed, such as the adenitis, deafness, otitis media, naso-pharyngeal catarrh, chronic induration of the lungs, tubercular infection of the mediastinum, etc.

“As time passes, the teeth will be found to be mal-occluded, grossly irregular, and overcrowded; the gums are in the condition of gingivitis, the first stage of a pyorrhœa alveolaris destined to cause the inevitable loss of every tooth eventually. Sufferers from such a severe neglected adenoid condition will continually be having “fearful colds and deafness,” to quote their own words, in after life; and many sequelæ will persist. The stigmata are permanent and unmistakable to the discerning eye.

“Indeed such adults may be seen daily in every small gathering of people. They contribute to the livelihood of the Rhinologist and other members of the profession out of all proportion to their numbers, while they live, and indeed the Sword of Damocles hangs ever o’er their heads.

“In conclusion, I hold no brief for the neglect of the familiar symptoms, signs and history, in arriving at a diagnosis of adenoids, but as a valuable adjunct in estimating the severity of the condition, I would like to emphasise the significance of an early deformity of the maxillæ that would

appear to be due to causes of long standing, that is obviously not of a temporary nature, but moreover, is known to be progressive in its march."

Dental Disease.

The full figures relating to this matter are given in tabular form in the Appendix. Summarised they indicate the following grave facts:—

- (1) 2,645 children in the 5, 6 and 7 year old age-groups were inspected by the Dental Surgeon.
- (2) of this number 2,205 were found to require treatment.
- (3) 1,145 children were treated for one defect or another.
- (4) 1,198 fillings or stoppings were carried out.
- (5) 3,126 children had teeth extracted.
- (6) 2,272 attendances were made by school children for dental treatment.

It is most important to note that these figures relate to only a small area of the County and, speaking broadly, one would have to multiply them by eight if one were to indicate the extent of the trouble in the whole County.

Report of School Dentist (Mr. Whitworth, L.D.S.):—

"Out of a total of 2,480 children inspected only 275 did not require treatment. This leaves a very big number and should in time be considerably reduced as the mouths are gradually cleaned up.

"The number of clean teeth and mouths is very small in comparison to the number inspected. This number should increase as the Educational part of the work is done, but it is not much use educating the children unless something can be done to educate the mothers, and some scheme should be organised whereby the teachers could assist with tooth-brush drill. This I think has been suggested by me before. In my opinion we are starting too late at the age of 5 years. The damage has in a great number of cases been done by the time they come under my care and I think a good deal could be done to prevent this damage by treatment of mothers at the Welfare Centres and also advice. At one Centre where I had a chat to the mothers I found a great lack of knowledge on their part but very willing listeners. They asked lots of questions and seemed to want knowledge. This I gave and at the same time gave any mother who wished the opportunity of bringing the child to see me so that I could advise. As my age limit would not allow treatment in a number of these cases I am afraid the educational value was lost. There is also the case of the mouths of the mothers with young babies. In one case there was a bad history of a family, the children all having

bad teeth, and in one case glands in the neck. Here in my opinion the cause of the trouble was the very dirty and septic mouth of the mother who could not afford to see a private dentist. What is going to happen in these cases with the limited staff is a difficult proposition. What is going to happen about the mentally deficient cases? It does seem a pity we are not able to offer more treatment so that we could get the proper educational value for the work done.

“During the past 12 months numerous lectures have been given to the older children. Treatment has only been given to 165 of these children and in most cases it has been where, on making enquiries, I have found that they were in very poor circumstances.

“We have now got established in various parts of the County Minor Ailment Clinics. On several occasions I have been asked whether toothache is a minor ailment. This is a matter of opinion. With a proper staff these cases could be done, but at present this is impossible.

“Some time ago I reported this deficiency to the Education Committee and it was decided that two more Dentists be appointed. This will ease the situation temporarily, but before we can get a scheme working satisfactorily we shall have to add to this number. With the addition of these two we shall not be able to cover half the County. It seems a pity to me that certain areas received benefit whilst others do not. This point has been mentioned to me on several occasions.

“Another difficulty met with is children removing to different areas in the County or being transferred to different schools which are not, with the limited staff available, receiving treatment. These cases are at present lost, but I hope with an improved scheme to have all these cases followed up and transferred.

“These are in my opinion the chief difficulties which have been met with during the year. Next year I am hoping and expecting that the figures will show a marked improvement on this year.”

Summary of School Dental Work, 1923.

During the year January 1st to December 31st 25 Schools in five Districts were visited, and children of the ages:—

5 years.	Number inspected	...	540
6 "	" "	...	880
7 "	" "	...	1055
Total			2480

Out of this number amongst those of the age :—

5 years.	Required treatment	...	422
6	"	"	801
7	"	"	982
Total			2205.

The condition of the mouth was as follows :—

Age 5 years	...	162	were clean.
		259	" fairly clean.
		119	" dirty.
Age 6 years	...	157	" clean.
		459	" fairly clean.
		269	" dirty.
Age 7 years	...	136	" clean.
		540	" fairly clean.
		379	" dirty.

The condition of gums :—

Age 5 years	...	248	were healthy.
		186	" inflamed.
		106	" septic.
Age 6 years	...	287	" healthy.
		355	" inflamed.
		243	" septic.
Age 7 years	...	270	" healthy.
		443	" inflamed.
		342	" septic.

The condition of the bite :—

Age 5 years	...	229	Good.
		208	Average.
		103	Bad.
Age 6 years	...	266	Good.
		379	Average.
		240	Bad.
Age 7 years	...	252	Good.
		462	Average.
		341	Bad.

The 2,205 children selected for treatment :—

Age 5 years	...	204	applied for treatment at the Clinics.
		20	went to Private Dentists.
		198	refused treatment.

Age 6 years ... 391 applied for treatment at the Clinics.

36 went to Private Dentists.

374 refused treatment.

Age 7 years ... 550 applied for treatment at the Clinics.

49 went to Private Dentists.

383 refused treatment.

The number of children of the ages 5 years, 6 years and 7 years treated at the Clinics were :—1,145.

Number of attendances made by these children were :—2,272.

Number of children of other ages treated were :—165.

Table shewing Monthly Attendances, &c., at School Dental Clinics, 1923.

Month.		No. of Attendances.		No. Treated at Clinic.		No. of Specials Treated.
January	...	185	...	111	...	0
February	...	137	..	87	...	0
March	...	227	...	167	...	0
April	..	154	...	114	...	0
May	...	181	...	97	...	0
June	...	239	...	106	...	23
July	..	133	..	50	...	22
August	...	17	..	17	...	0
September	...	322	...	146	...	13
October	...	267	...	108	...	23
November	...	237	...	114	...	14
December	...	173	...	28	...	70
Totals	...	2272	...	1145	...	165

Dr. A. V. Stocks submits the following interesting remarks :—

“The number of children’s ailments attributable to carious teeth is considerable. I have seen during the year a number of cases of disordered digestion and malnutrition which were undoubtedly due to bad teeth. In a recent case the boy’s mother said that he would not eat any solid food : on examining the mouth I was not surprised as he had scarcely a single tooth that was not carious and the gums were inflamed and tender. Enlarged cervical glands are sometimes to be traced to the same cause and the same may be said of anæmia. One has met with both of these results of neglected caries of the teeth during

the year. As shewing the obscure symptoms that may arise from dental defects a case may perhaps be quoted.

"A girl, aged 6, was seen in February, 1922, at school, suffering from several carious teeth, enlarged cervical glands and attacks of vomiting and feverishness periodically, which were alarming the parents. The child's weight was 39 lbs. A brother had died of tubercular meningitis, which made the parents still more alarmed. The advice given was immediate dental treatment, fresh air and cod-liver oil and malt. Seen early this year the child had perfectly sound teeth, normal cervical glands, was normal in weight for her age and height, and the gastric and feverish symptoms had entirely disappeared."

Tuberculosis.

The total number of definitely diagnosed tubercular conditions was 44, in addition to which there were 28 cases of suspected pulmonary disease. These were referred either to their own doctor or to the nearest Tuberculosis Dispensary.

Nervous Diseases.

Under this heading are included four cases of epilepsy and twelve of chorea. Apart from these definite conditions there were a number of nervous affections of a slighter kind which Dr. Stocks specially refers to in the paragraphs quoted. Cases of this kind are much more common than is imagined and they need very careful handling both by teachers and parents.

"In addition to numerous cases of infantile paralysis, two cases of facial (Bell's) paralysis and several of the Erb-Duchenne type due to birth injuries of the cervical nerve roots were seen. Turning to an entirely different class of nervous diseases cases of habit spasm, chorea, epilepsy, petit mal and migraine were all met with during the year. In migraine the hereditary factor seemed to be borne out by enquiries in a number of cases, it being found that the mother had suffered from it in the past and in some cases did so still.

"As showing how chorea may sometimes be missed the following case is of interest. I was asked specially to see a boy aged 9½ who was thought by his own doctor to be a suitable case to be specially examined with a view to admission to a mental institution. I saw him at school and was told that he was quite uncontrollable at home, had been very irritable for several weeks, suffered from loss of memory especially when sent on errands, kicked and twitched in bed at night, talked in his sleep, and dropped things from his hands. There was a history of growing pains. For a month he had had twitching

about the mouth and had been very 'fidgetty' in class. On examination the tongue showed marked twitching and also the circum-oral muscles. The boy could read, write with ink from dictation and subtract correctly, knew the date, his age, name and address, and in fact appeared to be fairly normal as regards schoolwork and general intelligence. A diagnosis of chorea was made and the boy sent into hospital.

"The growing strain of modern life shows itself in children in a variety of symptoms of 'overstrain.' Amongst the commonest are talking and shouting in the sleep, reciting lessons when asleep, night terrors and somnambulism. Several cases of the latter have come under my notice during the year, the worst being that of a boy who got up in the night, walked out of the house in his sleep and was found looking in a shop window in the middle of the town, still in a state of somnambulism, and in his night attire. Another class of case is that of the normal or rather highly-strung child whose parent, herself very neurotic, sees her own nervous symptoms reflected in the child and tells everyone in the child's presence that the child is highly nervous, very delicate, easily frightened, and that it is a wonder the child is alive and so on. In such cases, and they are not by any means uncommon, it is the parent that requires treatment and not the child.

"One finds it useful in such cases to send the child out and have a few minutes talk with the parent on the influence of 'suggestion' on a highly-strung child. As Dr. Cameron has pointed out in his valuable book on 'The Nervous Child,' to suggest (for example) in front of a child that it is 'faddy about its food and won't eat this and won't eat that' is to implant in the child's mind a firm conviction that he, or she, is a remarkable and important individual who excites general interest because of peculiarities, and that were these latter to cease the interest might quickly die away. Hence the child is led to continue with its peculiarities in the hope of continuing to excite interest.

"I am convinced that the cure of at any rate some of these cases lies along the lines that Cameron suggests in his book, namely, on psychological lines, suggesting to the child that it is normal, healthy, and in no way different from other children."

Deformities.

Six cases of rickets, nine of spinal curvature and 14 other varieties of deformity were referred for treatment. The need for a comprehensive scheme for dealing with all crippling defects in school children is referred to in the Introduction to this Report.

Dr. Stocks gives some interesting facts and figures in the following paragraphs and when it is remembered that his figures refer only to one quarter of the County the extent of these disabling conditions will be apparent :—

“Ricketty manifestations were noted in 45 cases, most of which were not requiring any treatment or were already receiving all that was necessary.

“Genu valgum, mostly of slight degree, was seen in 28 cases, and two of genu varum were seen. Also a few cases of curved tibiæ, while abnormally shaped heads were by no means uncommon. The comparative rarity of severe sequelæ of rickets in the Infants’ schools at the present time is due in large measure, no doubt, to the work of the Infant and Child Welfare Centres and Visitors, and the effect of the continual education of public opinion that has gone on as a result. One very rarely sees in Cheshire schools a bad case of knock-knees or bow-legs nowadays, and the same may be said of other ricketty after-results.

“Some deformity was found to be present in 3 per cent. of the children examined at the routine inspections. These included 17 cases of infantile paralysis, several cases each of cleft palate, talipes, scoliosis, kyphosis, and mal-united fractures.

“Two cases of congenital torticollis seen the previous year have been operated upon with excellent results, as a consequence of recommendations made. In one case the family doctor had said that nothing could be done for the child previously.

“An interesting case from a medical point of view was a girl suffering from the somewhat rare condition known as ‘Achondro-plasia,’ which is a form of dwarfism due to stunting of the long bones by foetal bone disease between the third and sixth months of intra-uterine life. The cause is unknown, but model figures found in the tombs of the ancient Egyptians show that achondroplastic dwarfs were in existence then and that they were deified. The intellect is unaffected. The arms are short and when hanging down the finger tips reach to the iliac crest or trochanters. The gait is waddling and there is marked lordosis. The legs are short and in some cases the child can kiss its toes without bending the knees.”

The Normal Expansion of the Chest.

Dr. McIvor’s remarks on this subject are of great interest :—

“Life Insurance Companies warily refuse to accept, as an ordinary risk, the life of an adult who has a less range than

two inches' expansion of the chest, which means the difference between the girth of the chest on full inspiration and that of full expiration.

"It is known that in some cases of serious cardiac disability, for some reason, this expansion is very limited, and even in youths it is sometimes less than two inches for the above reason in my experience. In boys in Secondary schools the degree of expansion is usually much more. In a recent survey of them in my area, it was four inches or more in the case of 50 per cent.

"Worthy of comment, perhaps, is the indisputable (positive) correlation between the range of expansion, and the other clinical evidence of a sound constitution. It was noted, also, in a series of boys at these schools who had been kept under observation for several years, for various reasons, that many of them always showed the same difference between inspiration and expiration, though the average chest measurement was commensurate with their advance in age. Thus part of the field of preventative medicine would seem to have been already curtailed, the suggestion being that the disability was a permanent one. This may be a fallacy, for their plight might have been worse, if the malady had been progressive, and this moreover would not appear to be the case, as a general rule, for, of the whole total only 7 per cent. failed to show at least three inches of expansion at the end of the period of observation.

Spinal Curvature.

Dr. McIvor has some very interesting observations to make on this subject. He writes:—

"It is remarkable how frequently excessive hollowing of the back in the lumbar region is felt if not seen in routine inspection. It accompanies a prominence of the abdomen that has led to the suspicion and even diagnosis of *tabes mesenterica*.

"The form of spinal curvature, known popularly as "Round Shoulders," is in a large proportion undoubtedly one of the manifold stigmata of the rachitic diathesis. At any rate they occur together extremely frequently. If so, a long vista is displayed of factors entering into the causation of the deformity. All too soon it becomes permanent, though it may be masked from view by arching forward and rotation of the lumbar vertebrae, while if no attempt is being made to throw the shoulders back, the obvious rounding of the shoulders conceals a lateral deviation or scoliosis in the dorsal region. Scoliosis, or lateral deviation in its earlier stage, is at times due to an old attack of infantile paralysis involving one of

the lower extremities or muscles of the flank. It is merely compensatory in its action. It has been necessary to warn a physical instructor for singling out such a child for adverse notice and comment, as the result of his efforts to maintain an erect attitude by his natural method. There is no need to do more than allude to tubercular affections of the spine which show rigidity from the first."

Rheumatism.

Dr. McIvor offers the following comments on this condition:—

"The prevalence of the protean manifestations of rheumatic infection is reiterated. With a familial history, and a suspicion even of infectiousness at times, in its origin, it should rank as the chief cause of crippling in children and in adult life.

"The chronicity of chorea, a readily noted symptom, reveals its continuing character. Rheumatism often appears to arise from oral sepsis and naso-pharyngeal infection. Now, apart from true chorea, the nervous instability found in these conditions is notorious. But when Rheumatism or chorea are present with adenoids or unhealthy tonsils, the results of the mixed infection are more severe and far reaching.

"All children showing signs of chorea or habit spasm are, (as recommended by the Chief Medical Officer of the Board of Education, if my memory is not at fault), repeatedly examined at every Medical Inspection, appropriate treatment suggested, note made of their progress, or otherwise, of the incidence of signs of cardiac disease developing, or, if already present, whether compensation is satisfactory, and the infection quiescent. Indeed it is seldom wise to make a diagnosis of organic heart disease from one examination and suspected cases it becomes necessary to refer for observation at a future inspection, apart from the reporting of contributory defects, parents not being unduly alarmed until sure of one's ground."

Diet and the Endocrine System.

I submit the following observations of Dr. W. J. McIvor on this subject:—

"Many of the disorders of the glands of internal secretion are known to arise from the lack of vitamins, and are occasioned by a faulty dietary. Malnutrition and anaemia commonly follow in their train. Pathological obesity, on the other hand, is well-known, and noted in some instances in my area recently.

"The tendency to excessive growth of adenoid tissues

appears to be stimulated by an excessive and unsuitable carbohydrate intake. As an example of an unbalanced endocrine system, one may name the all too frequent thyroid insufficiency, presenting with the enlargement of the gland the threat of a later myocardial degeneration. Clinically, in these cases, one commonly already notes the systolic murmur in the mitral area the accentuation of the second sounds, and the forcible apex beat. Whether due to something lacking in the diet, or to infection that achieves the same end result, this enlargement of the thyroid gland is often seen in my area to co-exist with a marked gingivitis. Quite commonly too the enlargement of the thyroid gland is recorded to have supplanted a marked adenitis.

"The appropriate remedial measure for endemic thyroid insufficiency is recalled in the exhibition of minute doses of Iodide, amounting to two grains every fortnight, as applied so successfully in Switzerland, where goitres are almost universal, and attain large sizes."

Healthy Children.

The remarks of Dr. Stocks on this point are of particular interest and I do not recollect seeing any similar figures recorded in Reports of this character.

"It may be of interest to note that in the routine inspection of 4,600 children in 1923, 1,028, or 22.3 per cent. suffered from no ascertainable defect, or in other words a quarter of the children examined appeared to be in perfect health, even to sound teeth. The proportion was highest in the Rural schools, being about 29.6 per cent. In Altrincham it was about 21.6 per cent., and in and around Northwich about 20 per cent. and in Runcorn 18 per cent. From this it appears that perfectly healthy children are more numerous, proportionately, in the Rural areas."

Infectious Diseases.

There is nothing exceptional to record under this heading. All closures of schools with extremely few exceptions are authorised by me, as are all exclusions of particular scholars or groups of scholars.

Disinfection of schools by fumigation, spraying and the like is only rarely undertaken as I have ceased to attach the importance to these methods that I did some years ago. Thorough cleansing and aeration of such buildings with the occasional destruction of articles known to be specifically infected offer, in my opinion, a perfectly safe and rational method of controlling infection which after all is spread far more by infective persons than by infective things.

Epidemic Jaundice.

Dr. Marjorie H. King reports as under on an outbreak of this disease and though the cases occurred chiefly during the early part of this year the original ones were in November of 1923—hence the inclusion of Dr. King's report herein. The outbreak affected the children attending Helsby C.E. School. Dr. King writes:—

“I found that this epidemic has been going on for about three months. The first date I obtained was November 29th, when a child had been absent from school for about a week suffering from ‘biliousness.’

“The second case occurred during the Xmas vacation and returned to school at the beginning of term suffering from evident jaundice. The child was advised to see a doctor and was sent home. About two weeks later the brother of this case became affected, and was absent about two weeks. From that time onwards about 26 children have suffered from the disease and to-day there are 18 absent (No. on register—96), 12 of whom are believed to be suffering from this complaint.

“During my visit to the school I saw all the children who had had jaundice and also those brought to me by the teacher as suspicious cases. From the former I obtained what details I could and I advised the latter. I then visited six homes and there saw six cases supposed to be suffering from jaundice.

“From the mothers I obtained detailed accounts of the course of the illness. The typical symptoms are the following: abdominal pain—vaguely situated, loss of appetite, headache, vomiting, fever, diarrhoea usually followed by constipation, and in about two or three days jaundice is noticed, also dark coloured urine and clay-coloured stools. The mother in most cases gave a purge and sent the child back to school in 1—3 weeks.

“The above was the most usual course. One or two children turned faint and collapsed completely in school. One or two had attacks of severe diarrhoea in school. Some cases were well in a day or two. Others have lingered on for weeks. One now, after about six weeks, is dangerously ill with pneumonia. Diarrhoea and vomiting were always present and usually jaundice, although one or two parents would not admit having noticed any yellowing of skin or eyes.

“The outbreak appears to be associated in some way with influenza. Some of the cases who saw a doctor were diagnosed as influenza, and later jaundice developed. The adult population of Helsby seem to be in the throes of an influenza epidemic. At three of the six houses visited, one or other or

both parents had or had had recently influenza, associated with headaches, sickness, and abdominal pain, but no jaundice. One or two of the children were at home with what their mothers called "flu," and had coughs, headaches, abdominal pain, sickness, and these were the cases where jaundice was denied. I did not come in contact with older children, the majority I saw being between four and eight years old, but evidently the older children have not suffered to the same extent. I only heard of one case where an elder sister was affected.

"One of the reasons for the continuance of the complaint seems to be that the mothers insist in sending the children back to school before they are cured. Children have been off for a day or two and come with 'orange-coloured complexions.' They will be off again for another day or two—back again to school, and off again and so on. The child who is so very ill with pneumonia had been back to school for a week after some weeks' illness. A doctor saw her for the first time two days ago.

"It does not seem likely that infection is through the water supply as all Helsby has the same water. The infection seems to be from child to child and chiefly among the younger school children.

"The babies of the families are not affected. The cases were advised to stay at home seven days after apparent cure.

"I append a list with some details of the majority of the cases."

	Date.			
Case.	Age.	Duration of Illness.		Remarks.
1. C. E. ...	7	...	29th Nov.—3rd Dec.	"Billionsness." Brothers — Jaundice and Vomiting. Attended by own Doctor.
2. E. R. ...	6	...	During Christmas Vacation and about two weeks after	
3. F. R. ...	8	...	Two weeks after above	
4. V. H. ...	9	...	10th Jan.—three weeks	Sisters—Last week of illness at Runcorn and now well. Very ill—Diarrhœa—Jaundice—"Red-Sores"—came back to School one week, now dangerously ill with Pneumonia.
5. B. H. ...	6	...	10th Jan.—still absent	
6. L. H. ...	4	...	5th Feb. Very irregular till 25th Feb.	Severe Diarrhœa in School. Catarrh — Jaundice. Own Doctor.
7. G. T. ...	?	...	20th Jan.—still absent	
8. D. T. ...	6	...	22nd Jan —still absent	Influenza--Jaundice. Own Doctor.
9. M. B. ...	7	...	22nd Jan.—still absent	
10. M. E. ...	7	...	29th Jan.—two days	Severe Jaundice—Vomiting. Vomiting — Diarrhœa — Jaundice.
11. M. M. ...	7	...	5th Feb.—three weeks	
12. J. C. ...	7	...	5th Feb.—three weeks	Vomiting—Jaundice. Visited—Diarrhœa—Vomiting—Jaundice—now well.
13. H. G. ...	5	...	9th Feb.—still absent	
14. R. P. ...	6	...	11th Feb.—one week	Vomiting—Jaundice.

Case.	Age.	Date. Duration of Illness.	Remarks.
15. H. W....	?	... 11th Feb.—still absent ...	Absent on Doctor's Certificate of "Anæmia and Debility." Brother has Jaundice.
16. L. G. ...	6	... 15th Feb.—still absent ...	Visited—Mother has had Influenza—no history of Jaundice—Mother says boy has had Influenza.
17. R. A. ...	6	... 15th Feb.—still absent ...	
18. E. F. ...	6	... 15th Feb.—still absent ...	Visited—Diarrhœa—Vomiting—Jaundice—now better.
19. R. M. ...	6	... 18th Feb.—still absent ...	Visited—Vomiting—Diarrhœa—Cough—now well.
20. L. B. ...	?	... 21st Feb.—still absent ...	Visited—Epigastric pain—could get no history from mother.
21. I. B. ...	?	... 29th Jan.—one week ..	Diarrhœa — Vomiting — Jaundice.
22. M. R. ...	?	... 21st Feb.—still absent ..	Visited — in bed — Slight Jaundice. Own Doctor.

Medical and other Treatment.

The following figures give a summary of the defects treated or under treatment during 1923 :—

	Under the Authority's Scheme.	Otherwise.	Total.
Skin Diseases and minor ailments	691	479	1170
Defective Vision, Squint, &c.	1189	79	1268
Spectacles prescribed	886	98	984
„ obtained	579	140	719
Defects of Nose and Throat (Tonsils and Adenoids, &c.)	67	386	453
Dental Defects	1145	—	1145

The reason for the small number of operations on tonsils and adenoids is explained in a preceding section of this Report.

Fuller details of the treatment given to defective children will be found in the Tables contained in the Appendix.

The Work of the School Clinic in my Area.

Dr. W. J. Melvor comments on this as under :—

"This is carried out in a very efficient manner with the aid of the School Nurse, and under supervision of the Assistant School Medical Officer. The Clinic is regarded with a friendly eye by the physicians and surgeons in general practice, who are too busy with serious cases to desire the additional burden

of treating the minor ailments of school children. It may be doubted if the majority of the parents could be induced to consult a private doctor, for conditions, in their opinion, trivial, and involving unnecessary expense.

“Owing to the staff of the Clinic being so few, the clerical work would beneficially be cut down to a minimum, to enable the Nurse to spend more time in actual treatment, the work being already onerous. In the case of many of the children, it is of little use to present them with a supply, say of ointment, to be used at home. So too, during the holidays many relapse.

“Of the ailments treated, infections of an impetiginous nature are the commonest and in a few families ever present. Blepharitis is often seen arising from the above cause, and very amenable to treatment by a weak white precipitate ointment (one per cent.) This strength is suitable for cases of mild corneal ulceration and of conjunctivitis.

“Kathiolan is found very effective in the few cases of scabies discovered. Some children with otitis media have been treated chiefly with peroxide of hydrogen by drops merely, and all have benefited.

“Many cases of slight trauma, cuts, burns, etc., are usefully attended to before they are complicated by sepsis. The most difficult ailments to effect a cure of are naturally that of children who have had ringworm of the scalp for some time, either unrecognised or neglected. In a similar category were several members of one family suffering from tinea, sycosis, the eyebrows, etc., being involved, and the affection complicated by dermatitis and impetigo. The other cases of ringworm of the scalp, if seen early, appear to do well, when treated by inunction daily for ten minutes by Ung. Iodi. B.P. They clear up in about two months, but attend weekly at first for further observation. No relapses have yet occurred. In the final treatment of cases of ringworm of the scalp, and which perhaps have been over-treated, the application daily of olive oil is often very effective in restoring a healthy appearance to it; it is of little value however in active cases of the affection.”

Employment of School Children Act.

A large number of children have been examined under this Act. In a County area this work is very difficult to carry out and has necessitated on several occasions the special visit of one of your Assistant Medical Officers to a school to examine three or four children, the visit taking up perhaps three or four hours of the Assistant's time. However we have succeeded so far in meeting the demands made upon us.

Secondary Schools.

The following is a list of these in the County. In all of them we have carried out the medical inspection on the scheduled lines during the year :—

(1) Secondary Schools in regard to which the Authority have a statutory obligation to inspect :—

Altrincham County High School for Boys.
 Altrincham County High School for Girls.
 Calday Grange Grammar.
 Crewe County Secondary.
 Hyde County.
 Macclesfield County High School for Girls.
 Nantwich and Acton Grammar.
 Runcorn County.
 Sale County High School for Girls.
 West Kirby County High School for Girls.

(2) Secondary Schools that have requested the Authority to conduct the medical inspection :—

Lymm Grammar.
 Macclesfield Grammar.
 Sandbach Grammar.

The Lady Assistant Medical Officers conduct the examination of all girl scholars in these schools.

The following is a summary of the work done at the Secondary Schools :—

Number of children examined :—

Boys	...	...	...	...	...	504
Girls	555
Total	1059

Re-examinations :—

Boys	103
Total	103

Total of both Groups	1162
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Principal Defects referred for treatment and having received treatment :—

	Referred for Treatment.	Received Treatment.
Defective Vision	64	54
Dental Disease	79	56
Nose and Throat Conditions	21	16
Heart and Circulation ...	23	14
Rickets and Deformities ...	33	25

Fuller details are given in the Tables at the end of this Report.

Dr. A. V. Stocks submits the following interesting remarks on colour vision and heart disease in scholars attending Secondary Schools :—

Colour Vision.

“This is tested at the routine inspections in the Secondary Schools, though not at present in the Elementary Schools. Its practical importance lies in the fact that colour blindness is a bar to employment in several important occupations, chiefly, of course, the railway and marine services.

“It is estimated that 4 per cent. of the adult male population are partially colour blind (Dict. of Pract. Medicine, Leslie Paton’s article).

“The ordinary means of testing that has been commonly employed is by means of matching assorted wools (Holmgren’s test), but it has been found that a number of dangerously colour-blind persons succeed in passing the test. It is suggested by Paton that this is due to an increased power of discriminating differences of saturation or luminosity, this compensating for the loss of power to discriminate hues, to a certain extent.

“I have myself tested 1,500 Secondary School boys by means of the wool matching test and only discovered two to be colour-blind.

“Recently I have had the opportunity of using a new device of Dr. Edridge Green’s, by means of which no less than nine boys out of 288 examined were found to be partially colour-blind, or 2.8 per cent. I have therefore come to the conclusion that the wool-matching test is useless for this purpose and a waste of time.

“In place of wools Stilling used pseudo-isochromatic diagrams in which patterns of one colour were arranged on a background of its confusion colour. Edridge Green’s cards are based on this principle: on these cards, of which there are about twenty, letters composed of stars and blotches of irregular shape in one colour are placed among similar stars and blotches of the confusion colours. If colour vision is defective the person tested is unable to see the letters. The test takes very little longer than the wool-matching test, but as it requires some intelligence it is in my opinion most suitable for children of eleven years of age and upwards. The test has the further advantage in that it distinguishes degrees of colour blindness. It is rare to find total colour blindness (in such cases everything appears a uniform grey and *any*

rough test will suffice); the nine cases mentioned were either dichromics or trichromics, that is to say, were only able to distinguish two or three primary colours, respectively. In some there was a shortening of the red end of the spectrum. All these are to be classed as dangerously colour blind from an occupational standpoint. Persons with acute colour vision are hepta-chromic, that is to say, can distinguish seven distinct colours (the so-called primary colours); a person of normal colour vision can distinguish six. I found that a number of boys were pentachromic, distinguishing only five, but this is a defect of no practical importance.

Heart Disease.

"The possibility of overstrain from athletics is well illustrated by a case seen recently at a large Secondary school. The boy was examined in February, 1922, and was quite healthy. He is a very athletic boy and has done very well at the school sports, being an exceptionally good runner. Seen two years later he was suffering from marked tachycardia, the pulse rate being 132, without any bruit or marked dilatation. The boy did not look at all well and there were dark shadows under the eyes. There was no history of any illness between the two examinations.

"In another boy dilatation of the heart and a severe fainting attack followed immediately after running for a train whilst wearing a heavy overcoat and carrying a rather heavy school bag."

APPENDIX I.

STATISTICAL TABLES.

Public Elementary Schools.

Table I.—Return of Medical Inspections.**(A.) Routine Medical Inspections.**

Number of Code Groups Inspections—

Entrants ...	...	...	...	5494
Intermediates	...	...	...	6691
Leavers ...	...	...	...	7109
Total				19294

Number of other Routine Inspections ...

(B.) Other Inspections.

Number of Special Inspections	...	...	4498
Number of Re-inspections	...	...	2398
Total			6896

Table II.

(A.) Return of Defects found by Medical Inspection
in the year ended 31st December, 1923.

DEFECT OR DISEASE.	Routine Inspections.	Special Inspections.
	No. of Defects requiring Treatment.	No. of Defects requiring Treatment.
MALNUTRITION	39	8
UNCLEANLINESS	394	16
SKIN—		
Ringworm—		
Scalp	52	34
Body	7	26
Scabies	41	11
Impetigo	103	193
Other Diseases (Non-Tuberculous) ..	53	41
EYE—		
Blepharitis	125	263
Conjunctivitis	13	135
Keratitis	—	6
Corneal Opacities	—	14
Defective Vision (excluding Squint) ...	1356	994
Squint	59	204
Other Conditions	—	19
EAR—		
Defective Hearing	64	13
Otitis Media	125	19
Other Ear Diseases	6	2
NOSE AND THROAT—		
Enlarged Tonsils only	275	12
Adenoids only	223	14
Enlarged Tonsils & Adenoids	543	17
Other Conditions	—	—
ENLARGED CERVICAL GLANDS (Non-Tuberculous)	46	4
DEFECTIVE SPEECH	8	7
TEETH—Dental Diseases	1670	78
HEART AND CIRCULATION—		
Heart Disease—		
Organic	40	5
Functional	25	2
Anæmia	181	8
LUNGS—		
Bronchitis	29	4
Other Non-Tuberculous Diseases ...	4	—
TUBERCULOSIS—		
Pulmonary—		
Definite	3	2
Suspected	28	3
Non-pulmonary—		
Glands	29	3
Spine	2	—
Hip	1	—
Other Bones and Joints	1	—
Skin	5	—
Other Forms	2	—
NERVOUS SYSTEM—		
Epilepsy	4	6
Chorea	12	2
Other Conditions	2	—
DEFORMITIES—		
Rickets	6	—
Spinal Curvature	9	—
Other Forms	14	2
OTHER DEFECTS AND DISEASES	128	18

**(B.) Number of individual Children found at Routine
Medical Inspection to require Treatment
(excluding Uncleanliness and Dental Diseases).**

	Number of Children.		Percentage of Children found to require Treatment.
	Inspected.	Found to require Treatment.	
Code Groups—			
Entrants	5494	} 5070	26 %
Intermediates ...	6691		
Leavers	7109		
Total (Code Groups) ...	19294	5070	26 %
Other Routine Inspections	—	—	—

TABLE III.—Return of all Exceptional Children in the Area.

			Boys.	Girls.	Total.
BLIND (including partially blind).	(1) Suitable for training in a School or Class for the totally blind ...	Attending Certified Schools or Classes for the Blind ...	11	8	19
		Attending Public Elementary Schools ...	2	1	3
		At other Institutions ...	—	—	—
		At no School or Institution ...	8	5	13
DEAF (including deaf and dumb and partially deaf).	(1) Suitable for training in a School or Class for the totally deaf or deaf and dumb. ...	Attending Certified Schools or Classes for the Deaf ...	14	11	25
		Attending Public Elementary Schools ...	7	3	10
		At other Institutions ...	—	—	—
		At no School or Institution ...	4	1	5
MENTALLY DEFECTIVE.	Feeble-minded (cases not notifiable to the Local Control Authority).	Attending Certified Schools for Mentally Defective Children..	10	8	18
		Attending Public Elementary Schools ...	71	53	124
		At other Institutions ...	—	—	—
		At no School or Institution ...	29	21	50
	Notified to the Local Control Authority during the year ...	Feeble-minded ...	—	—	—
		Imbeciles ...	10	12	22
		Idiots ...	2	3	5
	Suffering from severe epilepsy -	Attending Certified Schools for Epileptics ...	2	3	5
		In Institutions other than Certified Special Schools ...	—	—	—
		Attending Public Elementary Schools ...	—	—	—
		At no School or Institution ...	2	1	3
PHYSICALLY DEFECTIVE.	Suffering from epilepsy which is not severe ...	Attending Public Elementary Schools ...	15	11	26
		At no School or Institution ...	4	3	7
	Infectious pulmonary and glandular tuberculosis ...	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board ...	10	4	14
		At other Institutions ...	—	—	—
		At no School or Institution ...	5	6	11
	Non-infectious but active pulmonary and glandular tuberculosis ...	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board ...	7	5	12
		At Certified Residential Open-Air Schools ...	2	2	4
		At Certified Day Open-Air Schools ...	—	—	—
		At Public Elementary Schools ...	45	32	79
	Delicate children (e.g. pre- or later tuberculosis, malnutrition, debility, anaemia, &c. ...)	At other Institutions ...	—	—	—
		At no School or Institution ...	25	22	47
		At Certified Residential Open-Air Schools ...	7	6	13
	Active non-pulmonary tuberculosis ...	At Certified Day Open-Air Schools ...	—	—	—
		At Public Elementary Schools ...	130	145	275
		At other Institutions ...	—	—	—
		At no School or Institution ...	25	17	42
	Crippled Children (other than those with active tuberculosis) e.g. children suffering from paralysis, &c., and including those with severe heart disease	At Sanatoria or Hospital Schools approved by the Ministry of Health or the Board ...	12	8	20
		At Public Elementary Schools ...	20	11	31
		At other Institutions ...	—	—	—
		At no School or Institutions ...	8	7	15
		At Certified Hospital Schools ...	2	1	3
		At Certified Residential Cripple Schools ...	—	—	—
		At Certified Day Cripple Schools... ..	—	—	—
		At Public Elementary Schools ...	64	40	104
		At other Institutions ...	—	—	—
		At no School or Institution ...	16	11	27

Table IV.—Return of Defects Treated during the year ended 31st December, 1923.

Treatment Table.

Group I.—Minor Ailments (excluding Uncleanliness).

Disease or Defect.	Number of Defects Treated, or under Treatment during the year.		
	Under the Authority's Scheme.	Otherwise.	Total.
SKIN—			
Ringworm—Scalp ...	30	44	74
Ringworm—Body ...	26	7	33
Scabies ...	8	36	44
Impetigo ...	193	81	274
Other Skin Disease ...	48	34	82
MINOR EYE DEFECTS (External and other, but excluding cases falling in Group II.)	280	154	434
MINOR EAR DEFECTS ...	29	77	106
MISCELLANEOUS ... (e.g. Minor injuries, bruises, sores, chilblains, etc.)	77	46	123
Total ...	691	479	1170

Group II.—Defective Vision and Squint (excluding Minor Eye Defects Treated as Minor Ailments).

Defect or Disease.	Number of Defects dealt with.			
	Under the Authority's Scheme.	Submitted to Refraction by Private Practitioner or at Hospital apart from Authority's Scheme.	Otherwise.	Total.
Errors of Refraction (including Squint). Operations for Squint should be recorded separately in body of Report ...	1189	52	79	1320
Other Defect or Disease of the Eyes (excluding those recorded in Group I.) ...	—	—	—	—
Total ...	1189	52	79	1320

Total number of Children for whom Spectacles were prescribed—

(a) Under Authority's Scheme	...	886
(b) Otherwise	... ..	98

Total number of Children who obtained or received Spectacles —

(a) Under Authority's Scheme	...	579
(b) Otherwise	... ..	140

Group III.—Treatment of Defects of Nose and Throat.

NUMBER OF DEFECTS.

Received Operative Treatment.

Under the Authority's Scheme, in Clinic or Hospital.	By Private Practitioner or Hospital, apart from Authority's Scheme.	Total.	Received other forms of Treatment.	Total Number Treated.
67	151	218	235	453

Group IV.—Dental Defects.

(1) Number of Children who were

(a) Inspected by the Dentist :—

	Aged		
	5	...	540
	6	...	885
	7	..	1055
	8	...	—
Routine age Groups.	9	...	—
	10	...	—
	11	...	—
	12	...	—
	13	...	—
	14	...	—

Total 2480

Specials 165

Grand Total ... 2645

(b) Found to require Treatment ... 2205

(c) Actually Treated ... 1145

(d) Re-treated during the year as the result of
periodical Examination ... 1145

(2) Half-days devoted to { Inspection ... 52 }
 { Treatment ... 374 } Total 426

(3) Attendances made by Children for Treatment ... 2272

(4) Fillings { Permanent Teeth ... 29 }
 { Temporary Teeth .. 1169 } Total 1198

(5) Extractions { Permanent Teeth ... 13 }
 { Temporary Teeth ... 3113 } Total 3126

(6) Administrations of general Anaesthetics for Extractions Nil.

(7) Other Operations { Permanent Teeth... 25 }
 { Temporary Teeth.. 186 } Total 211

Group 5.—Uncleanliness and Verminous Conditions.

(1) Average number of visits per School made during
the year by the School Nurses ... 4

(2) Total number of Examinations made of Children in
the Schools by School Nurses ... 135,399

(3) Number of individual Children found unclean ... 4,323

(4) Number of Children cleansed under arrangements
made by the Local Education Authority ... —

(5) Number of Cases in which Legal Proceedings were
taken —

(a) Under the Education Act, 1921 ... —

(b) Under School Attendance Bye-laws ... —

APPENDIX II.

STATISTICAL TABLES.

Secondary Schools.

Secondary Schools.
TABLE I.—Shewing Number of Children Examined at Different Ages.

																		Total.
Ages ...	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
Boys ..	—	—	—	6	5	6	6	15	56	107	57	41	66	83	42	14	504	
Girls ...	—	—	2	26	19	27	31	36	69	116	58	32	41	39	36	23	555	
Totals ...	—	—	2	32	24	33	37	51	125	223	115	73	107	122	78	37	1059	

Re-examinations.	Grand Total.
Boys ...	607
Girls ...	555
	<hr/>
	1162
	<hr/>

Secondary Schools.

Table II.—Shewing Nature of Defects referred to for Treatment and cases where Defects were Remedied.

DEFECT OR DISEASE.				Referred for Treatment.	Received Treatment.
MALNUTRITION	...	...	..	—	—
UNCLEANLINESS—					
Head	...	...	...	1	1
Body	...	...	...	—	—
SKIN—					
RINGWORM—					
Head	...	...	...	—	—
Body	...	...	...	—	—
Scabies	...	...	...	—	—
Impetigo	...	...	...	1	1
Other Diseases	...	...	...	1	1
EYE—					
Defective Vision or Squint	...	...	...	64	54
External Eye Disease	...	..	...	5	5
EAR—					
Defective Hearing	...	...	...	1	1
Ear Disease...	...	...	...	1	1
TEETH—					
Dental Disease	...	...	...	79	56
NOSE AND THROAT—					
Enlarged Tonsils	...	...	...	7	5
Adenoids	...	...	...	8	5
Defective Speech	...	...	...	—	—
Tonsils and Adenoids	...	...	...	6	6
HEART AND CIRCULATION—					
Heart Disease—					
Organic	...	...	..	7	6
Functional	...	...	...	2	1
Anæmia	...	...	...	14	7
LUNGS—					
Pulmonary Tuberculosis—					
Definite	...	...	...	—	—
Suspected	...	...	...	2	2
Chronic Bronchitis	...	...	..	2	2
Other Disease	...	...	...	—	—
NERVOUS SYSTEM—					
Epilepsy	...	...	...	1	1
Chorea	...	...	...	1	—
Other Disease	...	...	..	—	—
NON-PULMONARY TUBERCULOSIS—					
Glands	...	...	...	—	—
Bones and Joints	...	..	...	—	—
Spine	...	...	...	—	—
Hip	...	...	..	—	—
Other Forms	...	...	..	—	—
Rickets	...	...	...	—	—
Deformities—Spinal Curvature	...	..	..	13	13
OTHER DEFECTS OR DISEASES	...	...	...	20	12

